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To establish normative data using the Jebsen Taylor hand function test (JHFT) for normal, ethnically diverse South Africans aged between 20 and 59 years

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CHAPTER 6
CONCLUSION

The JHFT is a standardised norm referenced assessment tool that is used as an outcome measure in both clinical practice and research. It provides clinicians and researchers with an objective assessment that is quick and easy to administer. The purpose of the JHFT is to allow a patients' hand function to be quantified in terms of time and so the outcome of treatment can be easily recorded. This should be achieved by analysis of the results and comparison to the published norms.

The original test was standardised, in 1969, on 300 Americans with no mention made of the ethnic diversity or specific composition of the subjects chosen for the study. More recent research[23] conducted on the 20-59 year old age group suggests that the Jebsen et al[1] norms are not reliable for all populations, as there are statistical differences between more recently established norms and those in the original study .

This study met its first objective to establish norms for the JHFT on 120 normal, ethnically diverse South Africans between the ages of 20 and 59 years. Hand injuries requiring intervention from therapists are most common in this age group. The use of a standardised assessment like the JHFT can be valuable in charting the progress made in therapy as well as defining the outcome of therapeutic intervention. It was therefore considered important to establish valid norms for the ethnically diverse patient population that hand therapists regularly encounter in clinical practice and research studies.

The second objective of this study was to establish whether differences exist, in the norms on the JHFT, for four ethnically diverse population groups.
This small study did show significant differences in hand function based on ethnic groupings, gender and hand dominance were found when compared to the Jebsen et al's [1] study. This indicates that administering the JHFT in South Africa as a norm reference test with Jebsen et al's [1] published norms would not be a reliable option.

Thus the objective of establishing norms for the sample of 120 South Africans was met but needs to be viewed with caution. The second objective indicated that there are significant differences between the four ethnic groups for certain activities evaluated in the study. The norms obtained using the JHFT on the groups of White, Black, Coloured and Indian subjects (Table 7) only show a trend as the subjects were limited to 30 in each group..

It is recommended that further studies with larger sample sizes within each of the categories are required to establish norms for these categories so that meaningful comparisons can be made. It is not clear what effect education, socio-cultural background, socialisation and lifestyle had on the differences found. These factors are therefore worthy of further research. Review of other possible standardised outcome measures that are available to South African therapists should also be considered.
The normative data obtained in this study may allow the application of different norms if the JHFT is used as a norm-referenced test in South Africa, but the test is rarely used in this manner. The JHFT is mainly used as an outcome measure by comparing the scores of individual patients against their pervious scores. The JHFT was not originally designed to be used this way but it would appear this has become the accepted use in most research[12-14] in which it is reported.

Thus establishing norms for the South African sample may have been more of an academic exercise where it has been possible to show that there are differences in hand function between the population groups in this country. This needs to be taken into account when measuring outcomes clinically or in research. This study unfortunately did not consider all the possible factors that may influence hand function so more questions than answers as to why these differences exist, remain for others to research.

The research presented some advantages in using the JHFT in South Africa. It can be used by occupational therapists as long as they understand the original purpose of

the test and its limitations in terms of assessing hand function. They need to understand it would have to be used in conjunction with other assessments and should probably not be used as a norm reference test. If functional outcomes are to be assessed and recorded as part of any occupational therapy programme, the JHFT is at least affordable if constructed by the therapists, easy to administer and can be done in a relatively short time.

Like many standardised tests it does not fit the patient's perspective well. It has a number of limitations in terms of the subtests used to simulate common everyday activities [1] of different South African population groups. There are limitations as it does not assess bilateral hand function [52] and other questions about the content validity remain. It assesses speed rather than quality of hand movement [10]. However, it remains an assessment widely used in clinical research[12-14].

There is little information about the test being used in the clinical context alone. However, it is used extensively to measure hand function in research in stroke particularly[12,13,25] as well as traumatic hand injury[28,29], burns[40] and arthritis[26,27] of the hand.

Thus, the test has proved itself durable and if we wish to evaluate our outcomes in the effectiveness of treating hands with international studies, the JHFT may be the test of choice in terms of certain diagnoses.